

Notes on Some Cuculliinae (Phalaenidae, Lepidoptera). III.

On the Identity of *Glaea pastillicans* Morrison and the Species of the Genus *Chaetaglæa* New Genus.

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In the early winter of 1940 Mr. Henry Engel sent me specimens of a moth that some collectors were considering to be *Harpaglæa pastillicans* (Morrison). At that time, I had not decided as to what moth this name referred. Morrison's type of *Glaea pastillicans* being apparently lost, inquiries not having brought its whereabouts to light, I had only the original description to consider when attempting to identify this name.

After a careful study of the original description of *pastillicans*, it became evident that this name was a synonym of *Orthosia apiata* Grote. The most conclusive evidence for this synonymy was the reference to the red annuli surrounding the ordinary spots. Only three species of North American "Glaeines" have this feature, namely *Epiglæa apiata* (Grote), *Metaxaglæa inulta* (Grote) and *Metaxaglæa viatica* (Grote). The last species cannot be considered because the ordinary lines are dentate; only *apiata* and *inulta* have the lines more or less even; *inulta* likewise cannot be considered because the ordinary spots are extraordinarily large, and the reniform never has a dark punctiform spot in its base. Thus only *apiata* remains, and this variable species ranges in color from pale olive brown to deep purple brown, and the reniform either does or does not possess a dark punctiform spot in its base. Grote's type of *apiata* was reddish brown, a light phase, and possessed very evident ordinary lines and no dark spot in the base of the reniform. Morrison's type was of the other extreme, very dark, with obscure lines and with a dark punctiform spot in the base of the reniform; all this ample reason for Morrison to think that he had a different species; it also differed from typical *apiata* in the lack of the pale shade following the median part of the subterminal

line, but agreed with typical *apiata* in having that subterminal line reddish. The northern locality of Morrison's type precludes it being the species that Hampson called *pastillicans*, which is more southern.

I have examined over five hundred specimens of *apiata* from Maine, New Hampshire, Vermont, New York, Pennsylvania and New Jersey. These specimens showed all degrees of variation, some matching Grote's type exactly and others meeting exactly the requirements of Morrison's description.

From the foregoing discussion the following synonymy is at once apparent.

Orthosia apiata Grote, 6th Rept. Peab. Acad. Sc., 1873, 30, 1874.

Glaca pastillicans Morrison, Proc. Bost. Soc. Nat. Hist., xvii, 151, 1874.¹

New Synonymy!

Epiglaca apiata (Grote), Grote, Abhandl. Nat. Verz. Bremen, xiv, 95, 1895 (*apiata* herein designated type of *Epiglaca*!).

Epiglaca pastillicans (Morrison), Grote, Abhandl. Nat. Verz. Bremen, xiv, 95, 1895.

Epiglaca apiata (Grote), Hampson, Cat. Lep. Phal. B. M., vi, 433, pl. 106, fig. 11, 1906.

Epiglaca apiata (Grote), McDunnough, Checklist Lep. Can. and U. S., 85, 1938.

With the above synonymy a fact, it becomes obvious that *Harpaglaca* Hampson, "Cat. Lep. Phal. B. M., vi, 429, 1906," with type designated as *Glaca pastillicans* Morrison = *Harpaglaca pastillicans* (Morrison) by Hampson therein, is a synonym of *Epiglaca* Grote, "Bull. U. S. Geol. Geog. Surv., iv, 181, 1878," with type designated by Grote in the "Abhandl. Nat. Verz. Bremen, xiv, 95, 1895" as *Orthosia apiata* Grote = *Epiglaca apiata* (Grote), the generic names being isogenotypic. Since the above is so, it leaves the species placed in *Harpaglaca* by Hampson without a generic name; to remedy this condition the following generic name is proposed to replace *Harpaglaca*.

¹ It is quite evident that Grote's description appeared before Morrison's because the latter author makes reference to *apiata*, *multa* and *viatica*, all described at the same time, in his description of *Glaca sericca*, which appears on the same page as the description of *pastillicans*.

CHAETAGLAEA gen. nov.

Genotype: *Chaetaglaca cerata* Franc. new species.

Proboscis well developed; palpi short, porrect, not exceeding the front, clothed with scales and moderately long hair, the third joint drooping; eyes moderate and round; antennal scape without lashes, antennae of male minutely ciliated; thorax clothed with hair and hair-like scales, with a triangular, knife-edge, anterior tuft, no posterior tuft; the fore legs with the first segment of the tarsus with 4 to 6 large spines on the outer side; abdomen distinctly flattened, fringed with lateral and anal tufts, no dorsal tufts, clothed on the dorsum with scales and hair; fore wing with the costa almost straight, the apex square.

The male genitalia of the three species of this genus vary from almost symmetrical to quite asymmetrical; this asymmetry being mostly in the sacculus. The tegumen is long and moderately broad; the vinculum is long and narrow; the valves moderately long and rather narrow in their distal half, the sacculus large and tending to be unlike on both sides, pollex present in two species, the clasper ranging from well developed to almost vestigial. The aedoeagus is quite long and rather stout, and the vesica is armed with a single, very heavy, bulbous-based spine.

This genus differs from all the "Glacine" genera but *Psectraglaca* by the few heavy spines on the first segment of the fore tarsus; from *Psectraglaca* it differs by its smooth and coarser vestiture and the simple antennae of the male, those of *Psectraglaca* being pectinate. The male genitalia are distinctive in the large size of the aedoeagus and the large spine of the vesica.

Three species are included in the genus.

Chaetaglaca cerata n. sp.

Head and thorax pale fawn color; the fore wing glistening, pale, pinkish fawn color; the basal line indiscernible; the antemedial line even, slightly curved, running obliquely outward from costa to inner margin, rust colored, with a narrow, pale shade on its inner side; the postmedial line even, excurved slightly from below costa to vein M_1 (Vein 6), then erect to inner margin, rust colored, with a narrow, pale shade on its

outer side; the subterminal line erect from below costa to vein R_5 (Vein 7), then sharply angled out and then running parallel to the outer margin; terminal line a series of small black dots in the interspaces; median shade very vague, just traceable as a faint line from below reniform to inner margin; reniform and orbicular about equal in size, the orbicular nearly circular, the reniform slightly more elliptical, both of the same color as the ground, and with pale annuli; the veins on the disk of the wing marked by pale lines; the fringe concolorous, edged with rusty pink; the inner margin edged with bright rust color. Hind wing pinkish fuscous, darker in the female; the fringe pinkish. The abdomen pinkish fuscous, concolorous with the hind wings; the caudal margin of each segment edged with pinkish fawn color; the lateral and anal tufts bright rufous.

Expanse: 46 mm. to 50 mm.

The male genitalia symmetrical; the uncus and tegumen moderate; the vinculum long; the valves moderately long and heavy; the clasper stout and sharply curved; pollex present, stronger on the left valve; corona evanescent; the aedeagus long and stout, the vesica armed with a very stout spine with a subquadrate base.

This species most closely resembles *sericea*, from which it may be distinguished by its lighter color, rust colored ante- and postmedial lines, and the lack of the black spot in the base of the reniform; from *tremula*, the third and most variable species in the genus, it may be distinguished by the presence of the rust colored lines, the lack of a tooth on the antemedial line at vein 2A (1b) and the absence of the black dot in the reniform. It is usually lighter than this last species in color and has a far greater sheen to the wings; however, *tremula* varies to such a degree, that it is not safe to use color in separating this species from it.

The male genitalia differ from those of the other two species in that they are practically symmetrical, those of *sericea* and *tremula* being asymmetrical, especially the sacculus; the clasper is poorly developed in *sericea* and *tremula*, in fact almost missing in the last species, while it is well developed in the new species; *sericea* has no pollex and *tremula* the last remnants of

one; the spine in the aedeagus of *tremula* and of *sericea* has a rounded bulbous base, not quadrate.

Holotype: ♂, Mystic, CONNECTICUT, October 6, 1924 (Hermann Wilhelm), [in Coll. Franclemont].

Allotype: ♀, Finleyville, Pennsylvania, October 27, 1937 (Henry Engel), [in Coll. Franclemont].

Paratypes: 4 ♂♂, Mystic, Connecticut, October 7-26, 1924 (Hermann Wilhelm), [3 in Coll. Engel, 1 in Coll. Franclemont]; 1 ♀, Finleyville, Pennsylvania, October 19, 1936 (Henry Engel), [in Coll. Engel]; 1 ♂, 1 ♀, Nantucket Island, Massachusetts, October 10 & 19, 1939 (C. P. Kimball), 1 ♂, Nantucket Island, Massachusetts, October 1941 (C. P. Kimball), [in Coll. Franclemont, Brower and Kimball]; 1 ♀, Chilmark,

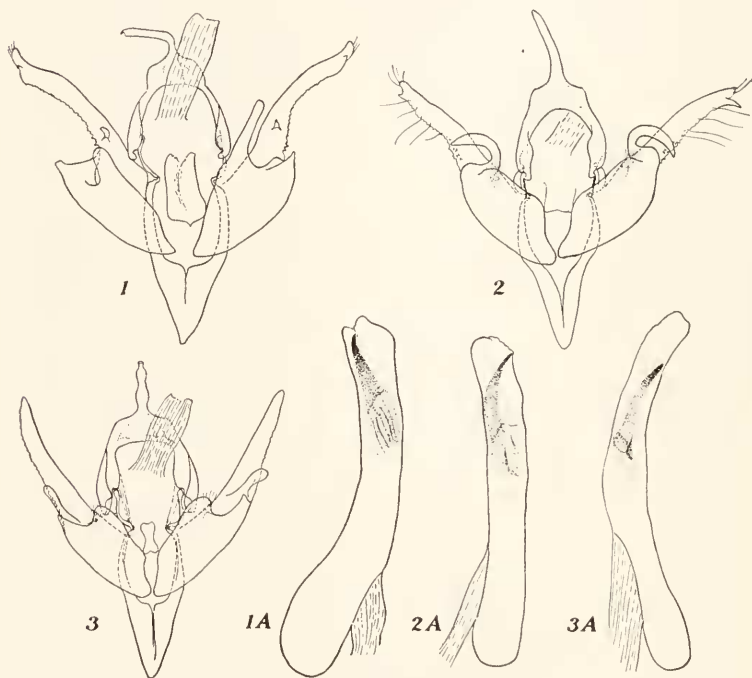


Fig. 1. Male genitalia of *Chactaglaca tremula* (Harvey). 1a. Aedeagus of *C. tremula*. Fig. 2. Male genitalia of *Chactaglaca cerata* Franc. (Holotype). 2a. Aedeagus of *C. cerata*. Fig. 3. Male genitalia of *Chactaglaca sericea* (Morrison). 3a. Aedeagus of *C. sericea*.

Martha's Vineyard, Massachusetts, November 10, 1934 (Geo. D. Eustis), [in Coll. Brower].

CHAETAGLAEA SERICEA (Morrison)

Glaea sericea Morrison, Proc. Bost. Soc. Nat. Hist., xvii, 151, 1874.

Glaea venustula Grote, Can. Ent., vii, 84, 1875.

Epiglaea venustula (Grote), Grote, Bull. U. S. Geol. Geog. Surv., iv, 181, 1878.

Harpaglaea sericea (Morrison), Hampson, Cat. Lep. Phal. B. M., vi, 430, pl. 106, fig. 9, 1906.

Harpaglaea sericea (Morrison), McDunnough, Checklist Lep. Can. and U. S., 85, 1938.

As long as he lived, Grote was doubtful as to whether his *venustula* was synonymous with Morrison's *sericea*; it seems that the Morrison type disappeared rather early. Dr. K. L. Chamberlin of the New York State Museum at Albany, New York very kindly compared specimens of the species that it has been customary to call *sericea* with the Grote type of *venustula*, which is in the above museum, and reported them the same.

Like the type of *pastillicans*, the type of *sericea* is apparently lost, but the original description is quite adequate, and Hampson's figure of the species is good and will serve as a typical example of the moth. There can be no doubt that *venustula* is a synonym of *sericea*; the original descriptions are quite similar in context,—both authors overlooked mentioning the presence of a dark spot in the base of the reniform, this spot may be rather inconspicuous, but is nevertheless present.

237 specimens of this species from New York, Pennsylvania and New Jersey have been examined; these specimens showed some degree of variation in the depth of the ground color, the relative emphasis of the lines and the size of the ordinary spots.

CHAETAGLAEA TREMULA (Harvey) ²

Glaea tremula Harvey, Bull. Buff. Soc. Nat. Sc., ii, 276, 1874.

Epiglaea tremula (Harvey), Grote, Bull. U. S. Geol. Geog. Surv., iv, 181, 1878.

²I have tried to definitely identify *Cerastis adulta* Guenée, "Spec. Gen. Lep., vii (Noct. iii), 393, 1852," but the original description is somewhat vague in places, nevertheless it leads me to believe that the Abbot figure of the moth, which I have not seen, is a species of the genus *Rhynchagrotis* or *Abagrotis*. For the time being the name may stand as a *nomen inquirendum* near *viatica* as suggested by Barnes and Benjamin in the "Contrib. Nat. Hist. Lep. N. Am. v (3), 141, 1924."

Harpaglaca tremula (Harvey), Hampson, Cat. Lep. Phal. B. M., vi, 430, pl. 106, fig. 10, 1906.

Harpaglaca ‡*pastillicans* Hampson (nec Morrison), Cat. Lep. Phal. B. M., vi, 431, text fig. 149, 1906.

Harpaglaca tremula (Harvey), McDunnough, Checklist Lep. Can. and U. S. 85, 1938.

This is the most variable species in this genus; it not only varies in the color of the ground and in the strength of the markings, but in the composition of the markings. The species reaches the maximum of variability in the southern part of its range; a series from north-central Florida presented some very striking color forms; I even suspected other species, but there was no variation in the genitalia of either sex, no matter how outstanding the color and pattern differences.

The ground color varies from pale lilaceous gray to deep purple gray, often heavily irrorate with black, and from pale lavender brown to intense russet brown, likewise often irrorate with blackish. The ordinary lines and the annuli of the ordinary spots may or may not be present and well defined; but the black spot in the base of the reniform is generally quite evident, whether the reniform is defined or not. The terminal area of the fore wing may be a glaucous white; such specimens present a very striking appearance. To attempt to name all the color forms would be an endless process and would only confuse the picture; being variations, there is every degree of intergradation between the numerous color forms. It was the custom, I think, following Hampson, to call the purplish gray forms *pastillicans* and the brownish forms *tremula*, treating them as separate species; this practice cannot be continued in anyway, not even as forms, as *pastillicans* Morrison is a synonym of *apiata* Grote. Thus only the name *tremula* remains, and under present conditions, it will be sufficient to place all the forms no matter how striking under this name.

I have examined over 700 specimens of this species; the specimens coming from New Jersey, Georgia, Florida, Texas and Arkansas; 109 genitalic slides were made of this species.

The three species discussed herein may be separated superficially by the following key.

- a. The antemedial and postmedial lines always present and evenly curved, preceded and followed respectively by a very evident pale shade.
 - b. The reniform rather elongated, with a black spot in the lower part; the ante- and postmedial lines blackish *sericea*
 - bb. The reniform more contracted, tending to be circular, with no black dot in the lower part; ante- and postmedial lines reddish rust colored.....*cerata*
- aa. The antemedial line when present with a distinct tooth on vein 2A, the postmedial line slightly irregular, no evident pale shades preceding or following these lines; the lines tend to become obsolescent in some specimens, often almost wholly missing.....*tremula*

The following arrangement of the species may be substituted for that in McDunnough's Checklist, page 85, replacing *Harpaglæa* with *Chaetaglæa*.

- CHAETAGLÆA** Franc.
cerata Franc.
sericea Morr.
venustula Grt.
tremula Harvey
~~†~~*pastillicaus* Auct.

Corrections to "Notes on Some Cucullinae (Phalaenidae, Lepidoptera) II, Ent. News, LIII, 31-35 & 63-66, 1942.

1. pages 31 and 63, the word "*Cucullinae*" in the title should read *Cucullinae*.
2. page 34, line 26, "*hemma*" should read *hemina*.
3. page 63, line 5 and page 64, line 13, the date "1883" should read 1893. J. G. F.

A New Species of Pholeomyia, with a Key to the North American Species (Diptera, Milichiidae).

By GEORGE STEYSKAL, Detroit, Michigan.

The apparently new species described below was included in a lot of flies submitted by C. S. Brimley, of the North Carolina Department of Agriculture.